

The impact of gender, age and the BMI on the effectiveness of traditional kinesiotherapy in the treatment of non-specific back pains.

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Abstract:

Introduction: Pain in the lower lumbar spine is currently one of the most frequently encountered problems of today's civilisation. Traditional kinesiotherapy is an element of physiotherapy which uses movement as the curing factor. Its objective is to restore the lost functions of the locomotor apparatus, increase the muscle strength and limited mobility in the joints and develop proper motor patterns in the patient. Usually, kinesiotherapy is conducted through active exercises performed under the supervision of a therapist or on one's own at home.

Objective: The objective of the paper was to evaluate the impact of factors such as gender, age and the BMI on the effectiveness of traditional kinesiotherapy in the treatment of non-specific back pains.

Material and methods: Prospective studies involved 50 patients of the Rehabilitation Ward of the Parczew Hospital aged between 27 and 55 (an average of 46.7 years). The research subjects underwent classical kinesiotherapy, which was applied through active exercises of free muscles of back, abdomen and gluteal muscles on the mat. Patients participated in a uniform therapeutic program made of ten exercises (each repeated 20 times) for 10 days. The ill patients were divided into 3 age groups (25-35 years, 36-45 years, 46-55 years) and 4 groups based on the value of the BMI (<18.5, 18.5-24.9, 25-29.9, >30). The evaluation of pain was performed three times: before, directly after the treatment and 14 days after completing the treatment,

by means of the VAS pain scale and modified Laitinen's questionnaire. The functioning

of patients in their everyday lives was evaluated before and after the treatment, using Stratford's scale (BFPS) and by means of the Oswestry Disability Index (ODI).

Results:

In all of the groups based on gender, age, as well as the



body mass groups, there was

a noticeable statistically significant drop in the level ($p < 0.05$) of pain by an average of 3.9 points measured by means of VAS and 3.7 points in Laitinen's questionnaire directly after completing the therapy, as well as by 3.8 points in the VAS scale and 3.8 points in Laitinen's questionnaire 14 days after completing the treatment. On the other hand, no differences between the studied groups were observed ($p > 0.05$). A significantly higher decrease by 5.2 points in VAS was noticed in the age group of 25-36 years ($p < 0.05$). The degree of disability measured by means of the ODI decreased significantly ($p < 0.05$), by an average of 13.8% in all of the studied groups. A significantly higher decrease by 17.6% was noticed in the age group of 36-45 years ($p < 0.05$). The functional level measured by means of the BPFS increased significantly, by an average of 5.7 points in all of the studied groups ($p < 0.05$).

Biography

Kamil Zaworski was born on 4 July 1985 in Parczew (Poland). In 2009 he completed his master's degree in physiotherapy, and in 2016 he earned a doctoral degree in the field

of health sciences at the Medical University in Lublin. He currently works in the Pope John Paul II State School of Higher Education in Biala Podlaska, holding the position of a senior lecturer. He is an author of papers on manual therapy, neuromuscular training and social health behaviours. His current scientific interests include medical training and the prevention of injuries in sports.

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